



ONTARIO MINISTRY OF ENVIRONMENT

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11 GUIDELINES FOR THE
HANDLING, STORAGE, COLLECTION,
TRANSPORTATION AND DISPOSAL
OF PATHOLOGICAL AND
INSTITUTIONAL WASTES

MINISTRY
OF THE
ENVIRONMENT

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INTRODUCTION

Some years ago, two separate groups in Metro Toronto became concerned about the existing practices of waste disposal from hospitals and veterinaries. The Ontario Hospital Association is concerned about the large amount of pathological waste being generated by hospitals and also by the fact that existing incineration facilities are rapidly becoming overloaded. At the same time, Metro Officials themselves were aware of the increasing number of small animals to be disposed of each year.¹ Certain wastes generated in hospitals, clinics, veterinary establishments, etc., require special precautions during storage, collection, transportation and disposal.

This guideline covering the special precautions associated with handling, storage, collection, transportation and disposal of pathological and institutional waste has been developed to ensure that environmental impairment and public health hazards would be minimized.

These guidelines should be followed unless other measures directed by or expressly permitted by other applicable Ontario or Canada legislation are taken. It should be noted that such other legislation may impose more stringent requirements.

1. Love, L.S., and Associates, Pathological Waste Survey, (March 1973, revised December 1974), page 7

The guidelines reflect special procedures for the handling of pathological and institutional waste, existing provisions of Ontario Regulation 309, and good operating practices at landfill sites. Existing sites accepting these wastes may be required to submit operating plans.

The Canadian Standards Association in conjunction with the Ontario Hospital Association is preparing a standard for the handling of waste materials within Health Care Facilities. This standard is compatible with requirements in this document.

This document is based on Ministry Policy #14-05.

GUIDELINES FOR THE
HANDLING, STORAGE, COLLECTION
TRANSPORTATION AND DISPOSAL OF PATHOLOGICAL
AND INSTITUTIONAL WASTES

Definition and Classification of Pathological and Institutional Wastes

Pathological Wastes

The term "pathological waste" refers to certain materials which are offensive to the senses or hazardous to public health. Such wastes may originate in hospitals, laboratories, doctors' offices, veterinary hospitals, abattoirs, etc. The term "offensive" is applied principally to anatomical waste such as human tissue. Infectious material and carcasses of certain infected animals are included.

Institutional Waste

The term "institutional waste" refers to carcasses of non-infected animals.

These definitions supersede all previous definitions used by the Ministry of the Environment. The method of disposal for all pathological waste is by incineration in an incinerator approved for this purpose. Human anatomical wastes must be segregated and managed and disposed of separately in facilities designed and approved for this purpose. This waste should be accompanied by a statement identifying the type and source of the waste. Although it

is preferable to incinerate institutional waste, this waste may be disposed of into a landfill site approved for this purpose.

Classification of Pathological and Institutional Waste

Type A Pathological Wastes

- Class 1 Human anatomical waste includes any part of a human body but excluding non-infectious extracted teeth, hair, nail clippings and the like.
- Class 2 Animal anatomical waste includes all or any part of a carcass suspected by a veterinary practitioner to be infected with a communicable disease.
- Class 3 Non anatomical-infected includes infected waste from all establishments that is not anatomical.

Type B Institutional Wastes

- Class 1 Animal anatomical wastes not included in Class 2, Pathological Wastes but excluding non-infectious extracted teeth, hair and nail clippings and the like.

NOTE: All other wastes apart from those above fall under the general requirement of the Environmental Protection Act and Regulation 309 and are handled, stored, collected, transported and disposed of as part of the normal waste stream. Drugs, liquids, needles and other sharp objects must be placed in hard shell containers prior to bagging.

Blood is acceptable for disposal into sanitary sewers subject to local by-laws and adequate sewage treatment facilities. Blood to storm sewers is not acceptable.

Handling

Pathological and institutional wastes are produced by specialized institutions, hospitals, clinics, veterinary

establishments, etc. The in-house handling of waste from hospitals and other large institutions can best be managed by the Infection Control Committee. For facilities where no central authority exists for waste management, guidance may be provided from an existing governing organization or accepted codes of practice.

Storage

All facilities that store anatomical waste shall have closed cold storage facilities kept at a maximum of 4°C.

Personnel designated for the collection and/or segregation and/or packaging of pathological and institutional waste should be fully informed of applicable handling procedures and safety precautions. Consideration should also be given for possible inoculation of all personnel handling these wastes. Hospitals should follow accepted codes of practice.

Pathological and institutional waste should be segregated as designated herein, double bagged, properly closed, labelled as to source and content and colour coded as designated hereunder. (Only the outer bag needs to be coloured). Colour coded bags of waste may be placed in rigid secondary containers to facilitate further handling, storage and collection.

When drugs, needles and syringes are disposed of, they should be placed in a rigid sealed container. Care should be taken prior to pick-up to ensure that only authorized personnel have access to the waste.

Type A Class 1 Waste - Pathological - Human Anatomical

This waste should be double bagged, outer bag RED, properly closed, labelled and refrigerated to a maximum of 4°C. A statement should be provided for the container certifying source and content. The bagged waste may also be stored in a specially designed hard shell container, preferably colour coded (red) for ease of mechanical handling for transportation and disposal.

Type A Class 2 Waste - Pathological - Infected Animal Anatomical

Procedures for storage, transportation and disposal of Type A Class 2, animal anatomical waste infected with a communicable disease, are regulated by applicable Provincial and Federal Government regulations which should be adhered to.

This waste should be double bagged, outer bag ORANGE, properly closed, refrigerated to a maximum of 4°C and labelled indicating "Waste Is Infected With Communicable Disease".

Type A Class 3 Waste - Pathological - Non-Anatomical-Infected

This waste should be double bagged, outer bag YELLOW,

properly closed and labelled as to source and content.

Needles and other sharp objects must be placed in a rigid puncture proof container prior to bagging. Liquids should be placed in impact resistant hard shell containers and colour coded accordingly. Contents should be labelled accordingly.

Type B Class 1 Waste - Institutional - Animal-Anatomical

This waste should be double bagged, outer bag BLUE, properly closed, labelled, and refrigerated to a maximum of 4°C.

Collection and Transportation

Anyone who is engaging in the hauling of waste is operating a Waste Management System. The operator of a Waste Management System is subject to the Environmental Protection Act, and Ontario Regulation 309.

In addition to the standards outlined in Ontario Regulation 309 and the requirements under the Environmental Protection Act, transportation vehicles for anatomical pathological and institutional waste should be clean, insulated and refrigerated.

Transportation vehicles should be specially designed to accommodate the special interest to be served by the vehicle. The vehicle should be designed for ease of

cleaning. It should be disinfected on conclusion of each day's work and should be stored in such a manner that while in storage, people or vectors may not accidentally come in contact with any pathogens or that any weathering process (wind, rain) may not carry any particles (dust) that are or may be contaminated with pathogens.

Disposal

The method for disposal of all pathological waste is incineration in an incinerator approved for this purpose. For institutional wastes, incineration is desirable but not considered essential. Institutional waste may be disposed of in approved landfill sites that are suitable for this purpose. There has been no evidence of problems encountered with disposal of institutional wastes in this manner. The sites accepting these wastes should be closely controlled in accordance with standards specified in Appendix I.

APPENDIX I

Standards for the Location, Maintenance, and Operation of a Landfill Site for the Disposal of Institutional Waste

In addition to the standards for landfill sites in Ontario in Regulation 309, the following standards apply:

1. Adequate and proper equipment shall be provided for the covering of waste with cover material.
2. Prior arrangement shall be made by the Waste Management System Operator with the Site Operator regarding the time of delivery and quantity of waste intended to be disposed into the site.
3. The Site Operator of the waste disposal site shall not accept any waste unless the waste can be disposed expeditiously.
4. Waste shall not be stored in temporary holding facilities on the site.
5. Waste shall be deposited in an orderly manner in the landfilling area and immediately covered to a minimum depth of 1 metre.
6. Waste shall not be compacted until first covered with cover material.
7. Waste shall be delivered to the site by the Waste Management System Operator in packaging as described in the guidelines.
8. Waste shall be deposited in an area designated by the Waste Management Site Operator.
9. Manual handling of waste material on the site shall be minimized.

APPENDIX II

SUGGESTED PROCEDURES FOR PERSONNEL HANDLING PATHOLOGICAL WASTES

Personnel who are involved with the collection, segregation, packaging, storage, or transportation of pathological waste and who are exposed to potentially infective materials via the percutaneous route, ingestion, or contamination of mucous membranes should:

- a) determine the source and content of the material involved;
- b) determine the details regarding any disinfection or sterilization of the material, before the exposure;
- c) report this incident to his or her immediate supervisor;
- d) report this incident to a legally qualified physician.
- e) report this incident to the Ministry of the Environment if the incident occurs outside the institutional buildings.

Personnel who are involved with the collection, segregation, packaging, storage, or transportation of pathological waste and who become ill following exposure to potentially infectious or toxic wastes should:

- a) report the illness to his or her immediate supervisor;
- b) report the illness to a legally qualified physician;

Where this disease is reportable the physician should report it to the local Medical Officer of Health of the health unit or municipality in which the person is resident. Reportable diseases are cited in the Communicable Diseases Regulation under the Public Health Act.

NOTE: "via the percutaneous route", refers to the transfer of infective or toxic material through the skin, such as by needle, stick, or contamination of cuts, abrasions, or scratches.

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